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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/027,752 | 12/20/2001 | Peter John Van Den Brink | 903-55 | 3782 |

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| EXAMINER | |
|---|---|
| HANDY, DWAYNE K | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1743 | |

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

A8

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/027,752 | VAN DEN BRINK ET AL. | |
| | Examiner | Art Unit | |
| | Dwayne K Handy | 1743 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *20 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/20/2001*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-9, 11, 12, 15, 18, 19, 24, 25, 27, 29 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Kilcoin et al. (6,190,619). Kilcoin teaches a system and methods for synthesizing chemical compounds in a plurality of reaction vessels. The overall device is best shown in Figures 3 and 17. The device includes a body (22) for holding a plurality of vessels, a plurality of reaction vessels (16), a lid (20) with holes and a manifold (38), and a gasket material on the lid (96, 98) as well as on the surface of the reaction vessel (Figure 21, #130). The reaction vessels are closed on the top by a cap vent (54) having a rotatable valve (70) for opening and closing the cap. When assembled, the holes of the lid (20) align with the upper holes of the reaction vessels. Kilcoin teaches a method of accessing a reaction vessel that includes providing and accessing the device to add fluids in claims 7-9. Heating is recited in column 6, lines 36-45.

### *Inventorship*

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 10, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilcoin et al. (6,190,619) in view of Desrosiers et al. (6,410,332). Kilcoin teaches every element of claims 10, 13 and 14 except for the openings of the cover are closed with permeable material, condensing means, or filter means. Desrosiers teaches a method and device for trapping and analyzing fluids escaping. The device of Desrosiers includes a sorbent layer (102) for trapping fluids from the reaction wells below (column 8, line 26 – col. 9, line 64, see Figures 3 and 4). It would have been obvious to one of ordinary skill in the art to combine the trapping layer from Desrosiers with the device of Kilcoin. One would add the trapping layer to trap fluids for subsequent analysis as taught by Desrosiers.

6. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilcoin et al. (6,190,619) in view of Hutchins et al. (6,060,024). Kilcoin teaches every element of claims 16 and 17 except for the stirrer means provided through an opening in the top of the reactor. Kilcoin teaches mixing (col. 6, lines 46-58), but does not specifically recite the mixing apparatus. Kilcoin also teaches mixing the entire block. Hutchings teaches a dissolution testing device comprised of reactor vessels having a mixing element (paddle) provided through the top of the reactors and connected to a driving device (Figure 2, columns 2 and 3). It would have been obvious to one of ordinary skill in the art to combine the mixing features of Hutchins with the device of Kilcoin. One would add the individual mixing paddles to each reactor to provide

adjustable mixing in each reactor. One would add the drive assembly to drive the mixing paddles.

7. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilcoin et al. (6,190,619) in view of Turner (6,508,984). Kilcoin teaches every element of claims 20-23 except for the various pieces of the device being comprised of the same material (steel). Kilcoin does teach a metal lid element (column 7, line 3), but does not specifically recite the use of steel in other elements. Turner teaches a reaction system that includes a reaction block. The block is comprised of a block holding element and a top plate. Both elements may be made of aluminum or steel (col. 13, lines 29-60). It would have been obvious to one of ordinary to combine the block materials teachings from Turner with the device of Kilcoin. One would use all steel in the device in order to provide a surface of equal heat transfer throughout the entire unit. This would be desirable for controlled heating and cooling of the device.

8. Claims 26 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilcoin et al. (6,190,619) in view of Cargill (5,609,826). Kilcoin teaches every element of claims 26 and 32 except for an orbital shaker. Cargill teaches a reaction block system. The block contains a plurality of vessels and is used in conjunction with a docking station (Figure 1). The docking station may also act as a vortex shaker while the block is on the station to provide mixing in the reaction vessels of the block (col. 11, lines 29-38). It would have been obvious to one of ordinary skill in the art to combine

the orbital shaker from Cargill with the device of Kilcoin. One would add the shaker in order to provide a gentle mixing element which could be used when rapid mixing is not required.

9. Claims 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kilcoin et al. (6,190,619) in view of Hamper (5,792,430). Kilcoin teaches every element of claim 33 except for an evaporation operation. Hamper teaches a reaction block for solid phase organic synthesis. Hamper, in column 7, lines 48-67, teaches evaporation as a way of concentrating and recovering products in the form of a solid. It would have been obvious to one of ordinary skill in the art to combine the evaporation teaching with the teachings of Kilcoin. One would use evaporation to collect solid products in the reaction vessel. The use of evaporation would allow for the recovery of solids without having to remove a liquid/solid mix from the reactor and then separate them.

10. Claims 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kilcoin et al. (6,190,619) in view of Sucholeiki (6,277,332). Kilcoin teaches every element of claim 28 except for ultrasound mixing. Sucholeiki (6,277,332) teaches a reaction system that uses an ultrasonic horn for mixing elements in the reactors (Figure 4, column 11). The ultrasonic mixing is used in conjunction with magnetic beads to result in an enhancement of the reaction rate in the vessels (column 12, lines 23-30). It would have been obvious to one of ordinary skill in the art, then, to combine the ultrasonic

mixing of Sucholeiki with the teachings of Kilcoin. One would add the ultrasonic mixing to take advantage of the enhanced reaction rate taught by Sucholeiki.

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Guller et al. (6,558,632), Dales et al. (6,548,026), Freitag et al. (6,485,692), Gallup et al. (6,132,686), Antonenko et al. (5,866,342), and McGowan et al. (6,238,627) teach reaction block systems.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwayne K Handy whose telephone number is (571)-272-1259. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DKH
September 30, 2004

Jill Warden
Supervisory Patent Examiner
Technology Center 1700